Business Models GNSS RTN project - Kick-off Meeting

Kick-off Meeting Minutes

Monday, December 21, 2020
9:30 AM - Zoom Meeting

Technical panel in attendance:

Mike Degenstein (Panel Chair – MDT)
Scott Read (Member – MDT)
Bill Weber (Member – MDT)
Matt Strizich (Member – FWHA)

Also in attendance:

Vaneza Callejas (Project Manager)
Dr. Ahmed Al-Kaisy (Principal Investigator, Montana State University)
Rafael Teixeira (Graduate Research Assistant, Montana State University)

Meeting started at 9:32 AM

Opening remarks by the Project Manager (PM)

- The PM asked all participants to introduce themselves before she went their roles and responsibilities in the project. The PM explained her role in the project as a liaison between the technical panel and the consultant team.
- The PM outlined that timeliness is critical, and reiterated her role as the communicator between parties, she then recognized the possibility of communication being done directly between parties but asked that a courtesy copy is sent to her if such communication occurred.
- The PM raised a question about project materials being published or presented at conferences. The PI shared that to his Understanding, if something is already approved and published by the Department than a publication is allowed with the appropriate credit to MDT. The PM noted that publications must be submitted to MDT even after the contract has been completed. The PI mentioned that in past projects, publication drafts were submitted to MDT for approval. A follow up with Susan Sillick will be done by the PM for clarification.
- The PM mentioned that files larger than 3MB should be transferred using the state file transfer service and that all project deliverables are considered draft until they are final and approved by MDT. The drafts are considered the consultant's best effort, and MDT does not assume an editing role. After reports are delivered, the panel is normally given 2 to 3 weeks to review them.
- The PM mentioned MDT has a new form for the quarterly progress reports and she emphasized the importance of the panel providing careful revision of those reports.

Presentation by the Principal Investigator (PI)

- The PI went over the project, explaining the motivation, objectives and project tasks.
- During the presentation, the PI reminded the panel that meetings outside of those in project schedule can be arranged if needed.

Post presentation discussion

- Scott asked if the business models will include all current existing CORS networks. The PI explained that the future statewide network will include the current stations that are part of the existing limited networks.
- Scott raised a question regarding the ownership of the stations. If business models will consider all networks or only public networks. The PI explained the existence of many possibilities on how to build and operate the system. The PI also Reminded the panel that more investigation on how the service is currently provided and the ownership of current existing stations is required for the incorporation of said stations in a future statewide RTN system.

Closing remarks

- Mike expressed excitement about project, shared a positive comment on the number of meetings scheduled, and emphasized the importance of knowledge on the ownership of the existing CORS stations – private, public, or hybrid.

The meeting was adjourned at 10:20 AM.

Analyze Business Models for Implementation and Operation of a Statewide GNSS RTN

Kick-Off Meeting, MDT Headquarters

December 21, 2020

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Research Motivation

- MDT and the State Library are collaborating to identify and resolve technical planning and design issues for the implementation and operation of a statewide GNSS-RTN.
- Researching various alternative business models is timely and much needed to inform the planning efforts for the development of the statewide RTN.

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Project Objective

Perform an assessment of the various alternative business models and to recommend to MDT (and other partners) the most appropriate business model(s) to pursue in the planning and development of a statewide GNSS-RTN system.

- System to cover all or most of state geographic area
- System to follow sustainable business operations

Project Tasks

1. Project Management
2. State of the Art Review
3. State of the Practice Assessment
4. Characterize Montana GNSS-RTN Existing Infrastructure
5. Catalog and Select Viable Business Models for Statewide GNSS-RTN
6. Evaluate Business Models and Recommend Most Appropriate
7. Performance Measures Report
8. Final Report
9. Implementation Plan

1. Project Management

- Kickoff and final meetings
- Other meetings (as needed) throughout project
- Quarterly progress reports
- Communication with the Panel Chair on technical issues (as needed) and with project manager on non-technical aspects of the project.

2. State of the Art Review

Extensive review of literature pertaining to:

- GNSS-RTN technology
  - System characteristics
  - Geospatial data precision
- GNSS-RTN applications
  - System benefits
  - Common stakeholders
- Business models for GNSS-RTN build and operation
  - Domestic or international

3. State of the Practice Assessment

- The goal is to screen the current practice in providing the GNSS-RTN location service in different states around the country
- Task is informed by:
  - An online agency survey
  - Follow-up phone interviews (when deemed necessary)
  - Input from the main GSNN-RTN manufacturers and vendors in the US

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4. Characterize Montana GNSS-RTN Existing Infrastructure

- Infrastructure used in providing GNSS location service in the state of Montana is inventoried and documented.
- Preliminary assessment of how existing infrastructure fits the future statewide GNSS-RTN system

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5. Catalog and Select Viable Business Models for Statewide GNSS-RTN

- Using results of tasks 2 and 3
- Catalog all business models that are used in the current domestic or international practice
- Pros and cons of various models are identified and discussed.
- The most favorable business models will be selected for further analysis in Task 6

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6. Business Model Evaluation for Future Montana GNSS Alternative Systems

- The future statewide GNSS-RTN system in Montana will be evaluated using the alternative business models identified in task 5 and the various service attributes.
- The most viable and fiscally sustainable business model is identified and recommended.

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7. Performance Measures Report

- Potential benefits of proposed GNSS-RTN system
- If possible, a quantitative assessment in the form of benefit-cost ratio will be performed.
- If quantitative analysis is infeasible, qualitative assessment of benefits is performed.

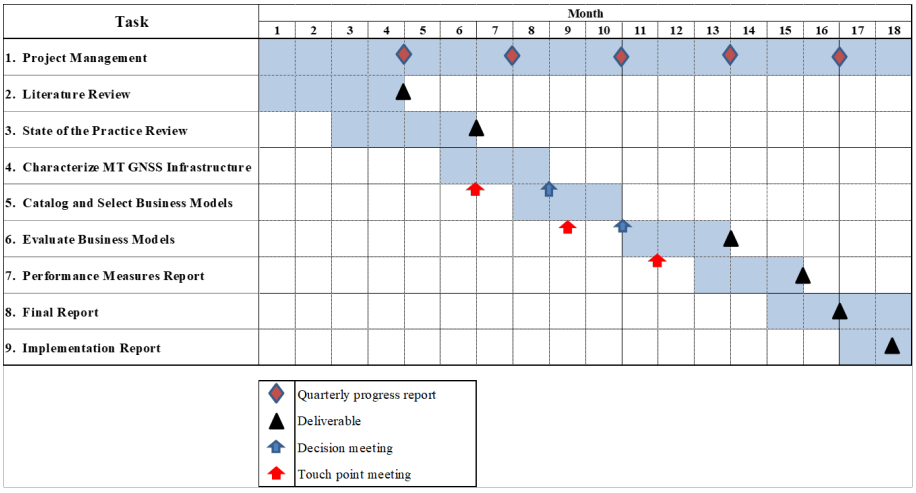
8. Final Report

- Documentation of all previous tasks
- Draft submitted to Tech Panel with 2-months first review and revision period.
- Final meeting if desired

9. Implementation Plan

- Overall implementation recommendations and guidelines
- Important for successful development and operation of the proposed GNSS-RTN system
- Implementation report

Project Schedule



Questions?